Assignment 7-9 Integer Multiplication 3

The problem is to multiply two integers a and b. ($0 \le a, b < 10^{250}$)

Input

The input consists of t ($30 \le t \le 40$) test cases. The first line of the input contains only positive integer t. Then t test cases follow. Each test case consists of two lines which give the two integers a and b ($0 \le a, b < 10^{250}$).

Output

For each test case, you are to output a single line containing the product of a and b.

Sample Input

3
10
3
4
0
0
8

Sample Output

30
0
0

Part of the program

You are required to write the function `multiplication` to complete the following program which solves this problem. In your program, you cannot declare global variables or static arrays.

```
#include <iostream>
#include <cstring>
using namespace::std;

struct HugeInt
{
   int size;
   int *digit;
};

// product = multiplicand * multiplier
void multiplication( HugeInt multiplicand, HugeInt multiplier, HugeInt
```

```
&product );

int main()
{
   char strA[ 251 ], strB[ 251 ];

   int T;
   cin >> T;
   for( int t = 0; t < T; ++t )
   {
      cin >> strA >> strB;

      HugeInt multiplicand;
      multiplicand.size = strlen( strA );
      multiplicand.digit = new int[ multiplicand.size ];
      for( int i = 0; i < multiplicand.size; ++i )
         multiplicand.digit[ i ] = strA[ multiplicand.size - 1 - i ] - '0';

      HugeInt multiplier;
      multiplier.size = strlen( strB );
      multiplier.digit = new int[ multiplier.size ];
      for( int i = 0; i < multiplier.size; ++i )
         multiplier.digit[ i ] = strB[ multiplier.size - 1 - i ] - '0';

      HugeInt product;
      multiplication( multiplicand, multiplier, product );

      for( int i = product.size - 1; i >= 0; i-- )
         cout << product.digit[ i ];
      cout << endl;
   }
}

// product = multiplicand * multiplier
void multiplication( HugeInt multiplicand, HugeInt multiplier, HugeInt
&product )
{




}
```